<u>**Amendments to the Claims:**</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>**Listing of Claims:**</u>

      1. (Currently amended) A method for outputting signals from dark reference pixels, the method comprising the steps of:

      (a) providing an image sensor having rows and columns of pixels, the upper portion includes rows of image capture pixels, the bottom portion including rows of dark <u>reference</u> ~~signal~~ pixels;

      (b) transferring <u>the</u> signals from the plurality of dark reference pixels that are substantially shielded from light to a plurality of sample and hold circuits; and

      (c) transferring signals substantially simultaneously from each of the plurality of sample and hold circuits to an operational amplifier on one clock cycle which operational amplifier produces a substantially average dark signal for each row of dark reference pixels.

      2. (Cancelled).

      3. (Previously presented) The method as in claim 1 further comprising providing a differential operational amplifier as the operational amplifier.

      4. (Previously presented) The method as in claim 1, wherein step (b) further comprises transferring the pixel signals from the plurality of pixels to the plurality of sample and hold circuits on a row-by-row basis.

      5. (Currently amended) An image sensor assembly comprising:

      (a) an image sensor having rows and columns of pixels, the upper portion includes rows of image capture pixels, the bottom portion including rows of dark reference pixels;

      (b) a plurality of active pixels that receives incident light that is converted into a charge;

      (c) a plurality of sample and hold circuits;

      (d) a plurality of dark reference pixels each of which is responsive to light and each of which is substantially shielded from light, wherein signals from

each of the dark reference pixels is transferred to one of the sample and hold circuits; and

(e) an operational amplifier that receives dark voltage signals for each row of dark <u>reference</u> pixels from each of the sample and hold circuits on one clock cycle, wherein the operational amplifier produces an average dark reference signal for each row of dark voltage signals.

6. (Cancelled).

7. (Previously presented) The image sensor as in claim 5, wherein each of the sample and hold circuits further comprises a charge storage element mated to each signal from the dark reference pixels, wherein a signal from each charge storage element is passed to the operational amplifier.

8. (Original) The image sensor as in claim 5, wherein the operational amplifier is a differential amplifier.

9. (Previously presented) The image sensor as in claim 5, wherein the pixel signals are transferred from the plurality of pixels to the plurality of sample and hold circuits on a row-by-row basis.

10. (Previously presented) A camera comprising:
an image sensor comprising:
(a) a plurality of active pixels that receives incident light that is converted into a charge;
(b) a plurality of sample and hold circuits;
(c) a plurality of dark reference pixels each of which is responsive to light and each of which is substantially shielded from light, wherein signals from each of the dark reference pixels is transferred to one of the circuits; and
(d) an operational amplifier that receives a signal from each of the sample and hold circuits on one clock cycle, wherein the operational amplifier averages the signals from the sample and hold circuits for providing an approximate average dark reference pixel signal.

11. (Cancelled)

12. (Previously presented) The camera as in claim 10, wherein each of the sample and hold circuits further comprises a charge storage element mated to each signal from the dark reference pixels, wherein a signal from each charge storage element is passed to the operational amplifier.

13. (Original) The camera as in claim 10, wherein the operational amplifier is a differential amplifier.

14. (Previously presented) The camera as in claim 10, wherein the pixel signals are transferred from the plurality of pixels to the plurality of sample and hold circuits on a row-by-row basis.